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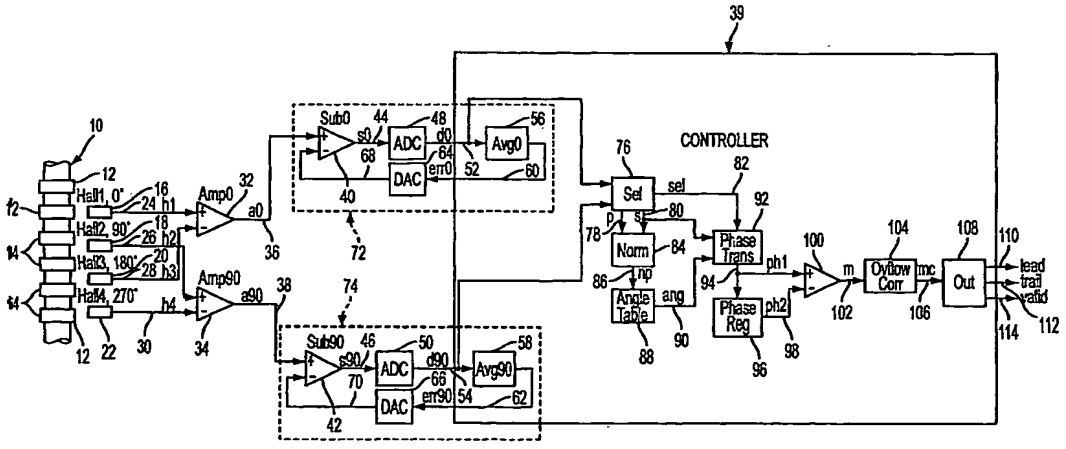
(54) Title: METHOD AND SYSTEM FOR ENHANCED RESOLUTION, AUTOMATICALLY-CALIBRATED POSITION SENSOR



(57) Abstract: A system and method for sensing position and/or displacement of a moving, substrate, ram, target, piston, encoder wheel or the like. The system comprises a plurality of transducers for generating two sinusoidal signals in quadrature related to the position and displacement of the substrate, ram or the like. Alternatively, the sinusoidal signals may be generated by other well-known means, such as by an optical encoder or the like. The two sinusoidal signals in quadrature are processed to provide enhanced resolution compared to conventional quadrature systems. The system is also capable of self-calibration in order to accommodate fluctuations in the two sinusoidal signals in quadrature.

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